

1.0 PURPOSE AND NEED FOR ACTION

1.1 Introduction

In February 2002, TN Emmons, LLC (TN Emmons), a subsidiary of Inland Management Corporation, requested that TVA and USACE approve an entrance road, community dock, and boat ramp, and that TVA approve a deed modification to allow houses and structures to be built on land in 3 areas on TVA flowage easement land. TN Emmons plans to develop 1000 acres of private, undeveloped land on the Norris Reservoir in Union County, Tennessee, for a residential community called Sunset Bay Residential Development (Sunset Bay). This property lies along the north side of a peninsula (Big Ridge) and fronts approximately 7 miles of Lost Creek embayment; the southwest end of the property is located at Clinch River Mile (CRM) 103R.

Since its initial sale in 1947, TVA has retained flowage easement rights over land below elevation 1044-foot mean sea level (msl) along the reservoir shoreline. These rights, over privately or publicly owned reservoir land, generally provide for TVA to flood the land and/or limit the erection of structures on the land. In 1959, TVA relinquished certain rights that were part of the original sales agreement, but strengthened the right to flood and prevent excavation, fill, and erection of structures between elevation 1044-foot and 1020-foot msl. TVA fee land lies below elevation 1020-foot msl. Of the Sunset Bay property planned for development, approximately 840 acres, is located above elevation 1044-foot msl. TVA owns flowage easement landrights over approximately 160 acres of land below elevation 1044-foot msl along the Lost Creek embayment shoreline. TN Emmons requests a modification of deeded landrights over 15 acres of TVA flowage easement land at three locations for two future home sites and a parking lot.

Figures 1 and 2 provide vicinity maps of the location of the proposed subdivision development. Figure 3 shows the general location of the subdivision roads (public rights-of-way), which would be paralleled by power, sewer, and water lines and other infrastructure improvements. Figure 3 also illustrates the relative location of lots, including common areas, conservation buffer areas, land proposed to be deeded to Hallsdale Powell Utility District (HPUD) for wastewater treatment, and joint permanent easements. These easements would be common driveways providing access to lots which county roads could not provide. These roads would likely be graveled or paved if topography permits and would be maintained by the homeowners' association.

In April 1999, the TVA Board of Directors decided to adopt the preferred alternative (Blended Alternative) identified in the Shoreline Management Initiative (SMI) Final Environmental Impact Statement (FEIS) (TVA, 1998). The Blended Alternative emphasizes protection of important public shoreline values and includes a shoreline categorization system and shoreline development standards to protect sensitive resources. On November 1, 1999, TVA began implementing the Blended Alternative as its official Shoreline Management Policy (SMP) in permitting actions associated with residential shoreline development on all TVA reservoirs. This Sunset Bay Environmental Assessment (EA) incorporates practices consistent with the SMI Record of Decision (ROD) and the associated SMP. This EA incorporates by reference the findings in the SMI FEIS and ROD.



Figure 1. Sunset Bay Vicinity Map – Tennessee/Kentucky/Virginia

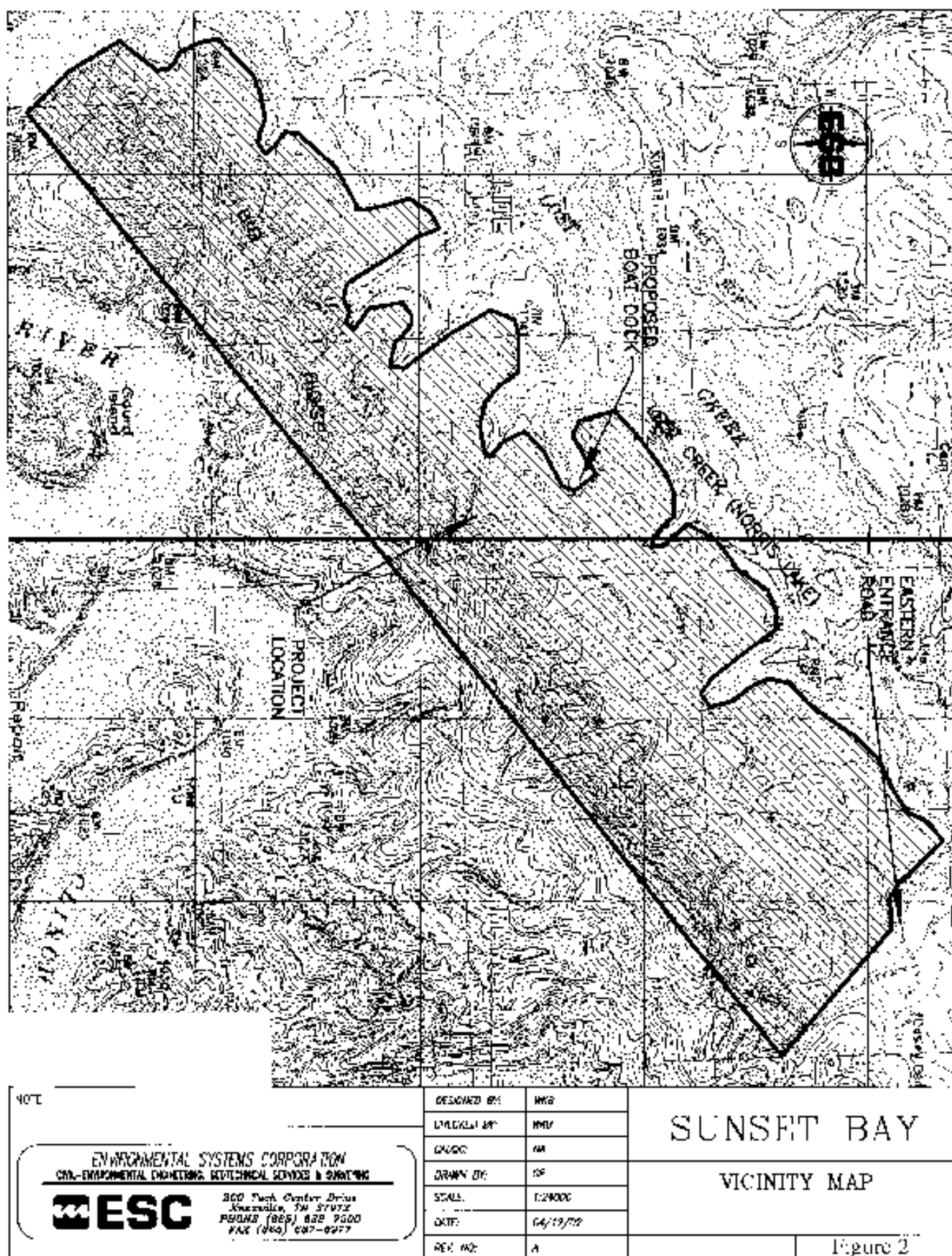


Figure 2. Sunset Bay Vicinity Map - Project Location

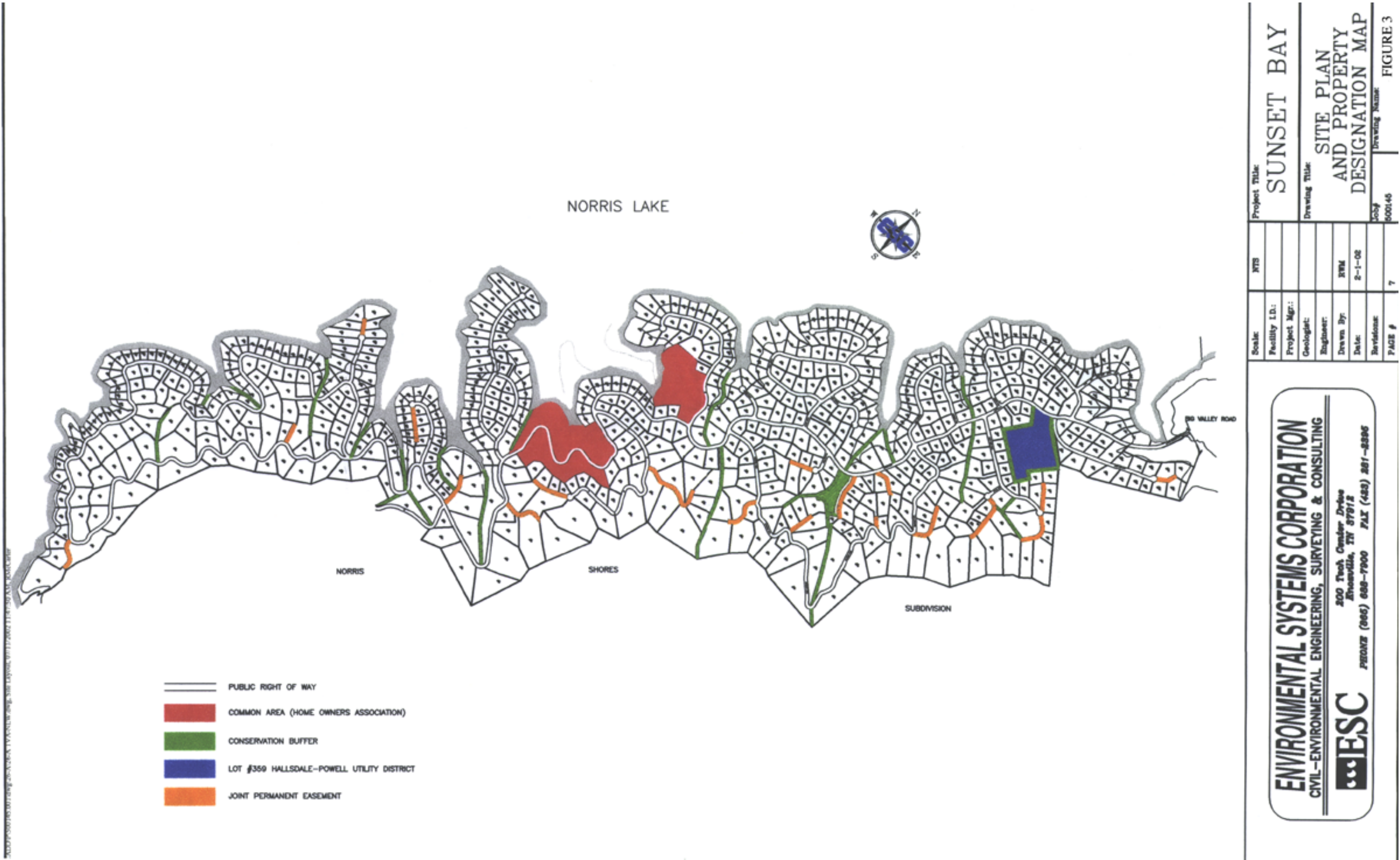


Figure 3. Sunset Bay Site Plan and Property Designation Map

The land abutting the project site is open, residential access shoreland under the SMI decision (TVA, 2001). On Norris Reservoir, TVA reserved the right for the benefit of the general public to use the shoreland (elevation 1020-foot msl contour) landward 250 feet or to elevation 1044-foot msl, whichever is the lesser distance, for certain recreation purposes. Specific rights for the general public include the right to hunt, fish, and picnic, but no overnight camping. The width of the flowage easement land ranges from about 45 feet (minimum) to 1220 feet (maximum). The average width of the flowage easement is approximately 230 feet.

The Norris Reservoir Land Management Plan (Norris Plan) categorizes the Lost Creek embayment along the entire 7-mile Sunset Bay shoreline as Residential Mitigation (TVA, 2001). Residential Mitigation shoreline includes segments of open, privately owned, residential access shoreline where resource conditions would require special analysis of development proposals, and perhaps specific mitigation measures, before a permit decision could be made. This shoreline category also includes those shoreline segments where additional data (such as endangered species inventories or archaeological surveys) about resource conditions would be needed before a permit decision could be made.

TVA and USACE have carefully considered the direct and indirect effects that would be caused by the federal actions related to the Tennessee Emmons application. Construction of a residential development on the Tennessee Emmons property is not dependent upon construction of the east entrance road; neither is it dependent upon approval of the deed modifications, fill, or the community boat slips. TVA believes, and the developer has confirmed, that development of the site would likely take place whether or not TVA or USACE take any action to approve the land or Section 26a actions. In fact, lots are being sold now, with no guarantee that there would be waterfront amenities provided. The availability of an alternate paved access road at the property line and the ongoing development of residential subdivisions in adjacent areas of Norris Reservoir without access to community facilities provide additional evidence to support TVA's analysis. Accordingly, it is assumed for the purposes of this review that the impacts of such backlying development would not result from TVA's approval of the Section 26a application and deed modification. These impacts are considered to be likely under both the action and no action alternatives. In its application to TVA and USACE, TN Emmons has indicated that no federal financial assistance will be used in this project. TN Emmons proposes to fund the total project costs, estimated to be about \$7.6 million. This EA is being prepared to assess the impacts of the federal actions, i.e., approvals under Section 10 of the River and Harbors Act of 1899, Section 404 of the Clean Water Act, Section 26a of the TVA Act of 1933, and TVA land use approval (deed modification). Activities needing federal approval are:

- Fill below elevation 1044-foot msl for riprap and culvert for the east entrance road.
- Deed modification (fill and/or structures) below elevation 1044-foot msl affecting three areas, which include the two peninsulas where 30 lots/homes are proposed to be built and the common lot where a clubhouse/deck and parking facility are proposed to support use of nearby community dock and other recreation facilities.
- A community dock and harbor limits to elevation 985-foot msl, dock access walkway (i.e., catwalk), clubhouse/deck, and boat launching ramp (including all areas of placement of fill for construction and riprap for stabilization).

- An off-site borrow area from which fill material would be obtained to raise land elevations to 1044-foot msl (or above).

1.2 Purpose and Proposed Action

TN Emmons plans to build a new residential subdivision on the Lost Creek embayment, Norris Reservoir. In order to facilitate the development, TN Emmons has requested that TVA and USACE approve an entrance road, community dock, and boat ramp, and that TVA approve a deed modification to allow houses and structures to be built on land in three areas totaling approximately 15 acres below elevation 1044-foot msl over which it owns flowage easement rights. In accordance with the National Environmental Policy Act, Council on Environmental Quality regulations and TVA NEPA procedures, TVA has assessed the potential impacts of the project on the environment. In the same manner, USACE has followed evaluation procedures contained under 33 CFR Parts 320-330. This EA documents the potential environmental impacts of the federal permits and land use approval (deed modifications).

As indicated above, 15 acres of land below elevation 1044-foot msl over which TVA holds flowage easement rights requires a deed modification to afford any new owner an unencumbered future title. Further, construction of an obstruction, e.g., road, fill material, dock, or other structure, in the Tennessee River or its tributaries must be approved (permitted) by TVA under Section 26a of the TVA Act. Any fill, excavation, or structure constructed below elevation 1044-foot msl is a violation of TVA's deeded landrights. At this time, however, TVA proposes to (a) approve a land use deed modification on about 15 acres of the approximate 160 acres of land over which it has retained a flowage easement so that the 15 acres could be used for future home sites, clubhouse/deck, and parking lot on the communal recreation lot and (b) approve a Section 26a permit application for the construction of fill, riprap, and culvert for the east entrance access roadway, one 336-slip community dock, access walkway (i.e., catwalk), boat ramp, and associated fills. The total amount of fill proposed for all construction below elevation 1044-foot msl is about 12.5 acre-feet. The areas for which this volume of material is calculated include the east entrance roadway and facilities associated with the communal lot.

It is contemplated that prospective landowners in the residential development may submit individual Section 26a permit applications to TVA for building private water-use facilities along Lost Creek embayment on TVA flowage easement land in the future. Likewise, USACE would review all future applications for water-use facilities along Lost Creek and determine whether permits can be granted. All such future activities would be individually reviewed by TVA under Section 26a. The completion of the various environmental inventories and evaluations as a part of this EA and the SMP could facilitate and expedite TVA's review of individual Section 26a applications. Future shoreline vegetation restoration, enhancement, and management over the private land would be encouraged by TVA and, where appropriate, tied to mitigation or conditions of Section 26a approvals.

The shoreline alterations being requested by TN Emmons are:

- Placement of fill, riprap, and culvert below elevation 1035-foot msl in order to raise the eastern entrance road above the 50-year recurrence interval flood.

- The construction of a multiple-slip, floating, community boat dock, access walkway, and boat launching ramp (including a small amount of fill to support the ramp at low reservoir elevations).

TN Emmons' conceptual residential development plan for 1000 acres of land (see Figure 3) is comprised of 695 home sites (of which 30 would require TVA deed modification on land below elevation 1044-foot msl); roads, sewer, water, power, and other utilities and infrastructure improvements; the placement of fill, riprap, and culvert for the east entrance roadway, a 336-slip community dock, access walkway (i.e., catwalk), clubhouse/deck, parking lot, launch ramp, and associated fill material. The project total number of shoreline lots and interior lots would be 239 and 456, respectively.

The original design for the community dock is proposed to be built in three stages and constructed of aluminum tubing with textured painted flooring and high-density polyethylene flotation. Upon completion of Stage I, the boat slips would accommodate 48 small watercrafts and measure 54 feet wide by 286 feet long. During each of Stages II and III, an additional 144 slips would be added. The dock is proposed to ultimately have 88 permanent boat slips (winter) and an additional 248 seasonal slips (summer) (Figure 4). During winter reservoir drawdown, hinged portions of the dock would be disconnected and removed. Slips removed during winter would be dry-stored away from the dock area. The maximum wintertime dock configuration would not extend beyond the summer configuration within the harbor (Figure 5). Proposed community dock facility details can be seen in Figure 6. An 8-foot-wide, hinged, access walkway would connect the dock to the shoreline.

During this review TVA recommended a reduction in size and redesign of the originally proposed community dock because of physical limitations and fluctuating water depths in the cove where the dock is planned to be located as well as potential boating and navigation concerns. In response, TN Emmons revised their plans to include a dock with 236 permanently floating covered slips designed to be portable enough to be moved out away from shore as the reservoir fluctuates from summer to winter pool elevations. It would be constructed of the same material mentioned above and would be reconfigured to 118 slips in winter by folding the hinged collapsible wings of each slip against the 6-foot wide walkway (catwalk). Figures 7, 8, and 9 depict one summer and two winter pool configurations at approximate elevations 1010-, 987-, and 974-foot msl, respectively. Dock dimensions, an illustration of how the hinged slips would be folded, harbor limits (i.e., buoy line), and boat ramp location are also shown.

Summer slips would not be removed from the dock, but the hinged collapsible walls would be folded flat against the sides of the dock. It would be built in stages, with the first stage accommodating 48 boats. During summer, the area of boat slips would measure approximately 600 by 145 feet and the catwalk would be about 210 feet long. As the reservoir is drawn down to winter pool level, the area of boat slips would be reduced to approximately 600 by 100 feet and the catwalk would be about 320 feet long. At a water level of approximately 974-msl, the area (size) of boat slips would not change, but the catwalk would be extended to be about 665 feet long. The total distance from the end of the dock to the shore (along length of walkway) would vary with reservoir elevations (depth). These distances are about 810 feet, 920 feet, and 1265 feet at approximate elevations 1010-, 987-, and 974-foot msl, respectively. Rather than a graveled or concreted path on the reservoir bottom, a walkway (catwalk) extending the dock out as the

reservoir goes down would be constructed of wood, aluminum, or other material with encased flotation which would lie on the reservoir bottom in winter.

Only Sunset Bay landowners, as long as they own the land in the subdivision, would be privileged to rent slips at the facility. Slips will be rented on a first come, first served basis and renters would be assessed a monthly rental fee. TN Emmons does not intend to operate the dock as a commercial facility and fees collected would be used to maintain and manage the dock properly. TN Emmons plans to retain ownership and management responsibility for the community dock, but retains the right to sell it in the future. A full-time management team, consisting of professional employees of TN Emmons, would manage the facility to ensure compliance with applicable environmental laws and regulations. TN Emmons may also consider transferring the community facilities to the homeowner's association or other entity, but the management structure would be retained.

A 30-foot-wide by 320-foot-long, reinforced concrete, boat launching ramp would also be built on the communal lot to provide residents convenient water access (See details in Figure 10). The top of the ramp would extend to elevation 1040-foot msl and the bottom to elevation 988-foot msl or about 32 feet below Norris Reservoir's full summer pool level of elevation 1020-foot msl. Approximately 161 cubic yards of fill material below full summer pool level would be needed to construct the ramp, which is proposed to be built at a 20 percent grade.

An entrance roadway across an unnamed tributary confluent to Lost Creek is proposed to be built at the eastern end of the property (Figure 11). This causeway would allow the shortest distance across the flood storage zone while maintaining acceptable horizontal and vertical alignment as well as minimum road elevation above the 50-year flood level. The road would be 20 feet wide with 6-foot curbs and 4.5-foot-wide shoulders on each side. The stream crossing would require the placement of 16 cubic yards of fill below elevation 1020-foot msl, a 3-foot-high by 5-foot-wide by 130-foot-long box culvert, and rip-rapped embankment side slopes from elevation 1020-foot msl to 1035-foot msl. The road fill would cover about 66,750 square feet, and approximately 3700 cubic yards of riprap would be installed. The road would cover about 0.15 acre (about 0.5 acre-feet of fill) on TVA land between the original 1020-foot msl and existing 1020-foot msl elevations. A small wetland of about 0.25-acre occurs in this area and would be affected by the project. It should be noted that the roadway could be constructed a short distance upslope and avoid TVA approvals or involvement.

The development is also proposed to have a clubhouse/deck with tennis courts, swimming pool, and attendant parking lots and open green space. These facilities (including dock and harbor limit buoys) would be constructed on or adjoining an 11.7-acre communal lot where the 11 abutting lots would not be considered waterfront, i.e., would not be eligible for individual water-use facilities or private docks. This information would be available to prospective lot buyers in TN Emmons' Interstate Exemption Statement (as a Vital Information Statement). These would be lot Nos. 366, 367, 368, 431, 432, 433, 434, 435, 436, 437, and 438. A portion of the clubhouse/deck and parking lot would be constructed on land subject to the proposed deed modification.

There are paved (maintained) county access roads to both proposed property entrances (east and south). Approximately 15.3 miles of roadway would be constructed to serve the residential development and provide access to the community-use facilities. These roads would be constructed to Union County standards and would be dedicated to the county as

public roads after their eventual inspection and acceptance. The county would assume maintenance responsibility for the subdivision roads.

Electric power service to the Sunset Bay development would be provided by the Powell Valley Utility District. The HPUD provides potable water service to the nearby community of Sharps Chapel and would provide sewer services to Sunset Bay. HPUD would also extend its available 10 inch diameter water line from Sharps Chapel to provide water service to the new subdivision. Municipal sewer service is unavailable on or near the property. Consequently, TN Emmons is designing an on-site sewage collection, treatment, and disposal system. The engineering report and plans for the proposed on-site sewer system and potable water system would be submitted to HPUD and the Tennessee Department of Environment and Conservation (TDEC) for approval. The sewage system would consist of individual treatment units located on each lot, a treated sewage effluent collection system, and disposal of treated sewage effluent via slow-rate land application. When constructed, the sewer facility would be owned and operated by HPUD. Lot 359 would be deeded to HPUD and would be the location for the wastewater treatment drain-field for the entire subdivision. It would be sown and maintained in grass and kept inside a chain link fence.

1.3 The Decision

Following completion of this EA, TVA will decide whether to approve, with or without conditions, (1) under Section 26a of the TVA Act, the requested placement of fill, riprap, and culvert for the east entrance roadway, community dock and harbor limits, access walkway and boat ramp, and associated fills, and (2) a request for deed modification for land that would be used for the near shore home sites, clubhouse/deck, parking lot, and associated fills.

The decision to be made by USACE is whether to issue, conditionally issue, or deny permits under Section 10 of the Rivers and Harbors Act of 1899 and under Section 404 of the Clean Water Act (CWA). These approvals are necessary for the construction and operation of the proposed entrance roadway, community dock, and boat launching ramp, and for all other impacts to wetlands or waters of the United States associated with the proposal.

1.4 Necessary Federal Permits

Approval under Section 26a of the TVA Act of 1933, as amended, is required for the construction of any obstructions in and along the Tennessee River or its tributaries. TVA approval is also required for any earth-disturbing or construction activities on TVA fee-owned land below elevation 1020-foot msl (full summer pool level of Norris Reservoir). TN Emmons has submitted a Section 26a application for road, fill, and culvert for the east entrance; and for a 336-slip community dock, access walkway (i.e., catwalk), launch ramp, and associated fill material proposed to be located below elevation 1044-foot msl. Land use authorization (deed modification) has been requested for land below elevation 1044-foot msl where TN Emmons proposes to fill for home site development, clubhouse/deck, and parking lot construction in support of the community recreation facilities. Land use requests for deed modifications would also be necessary for fills or excavations to construct structures below elevation 1044-foot msl.

As indicated in Section 1.3 above, construction of the community dock, placement of fill below elevation 1020-foot msl, and disturbance of wetland areas would also require approval by USACE under Section 10 of the River and Harbors Act of 1899 or Section 404 of the Clean Water Act. Section 10 prohibits the alteration or obstruction of any navigable waters of the United States unless authorized by the Secretary of the Army acting through the Chief of Engineers. Lost Creek (Norris Reservoir) between Mile 0.1 and 6.0 is a navigable water of the United States as defined by 33 CFR Part 329. Section 301 of the CWA prohibits the discharge of dredged or fill material into waters of the United States unless authorized by the Department of the Army pursuant to Section 404 of the same Act. Lost Creek between Mile 0.1 and 6.0 is a water of the United States as defined by 33 CFR Part 328. The evaluation of the impact of the activity on the public interest will include application of guidelines promulgated by the USEPA under Section 404(b)(1) of the CWA (Appendix D). Before a Section 404 permit can be issued, certification must be provided by the State of Tennessee, Division of Water Pollution Control, pursuant to Section 401(a)(1) of the CWA, that applicable water quality standards will not be violated (Appendix B).

Storm water, potable water system, and sewer system development authorizations from TDEC may be required for some development activities. TDEC, Division of Water Pollution Control, issued Section 401 Water Quality Certification and a Tennessee Aquatic Resource Alteration Permit in response to Joint Public Notice No. 02-38 and state of Tennessee application number NRS 02.165, Union County, on June 3, 2002. In response to a Notice of Intent submitted for a General Storm Water Permit, TDEC notified TN Emmons on June 7, 2002, that the development was permitted under the National Pollutant Discharge Elimination System (NPDES) permit number TNR100000 (NPDES permit tracking number TNR130227).

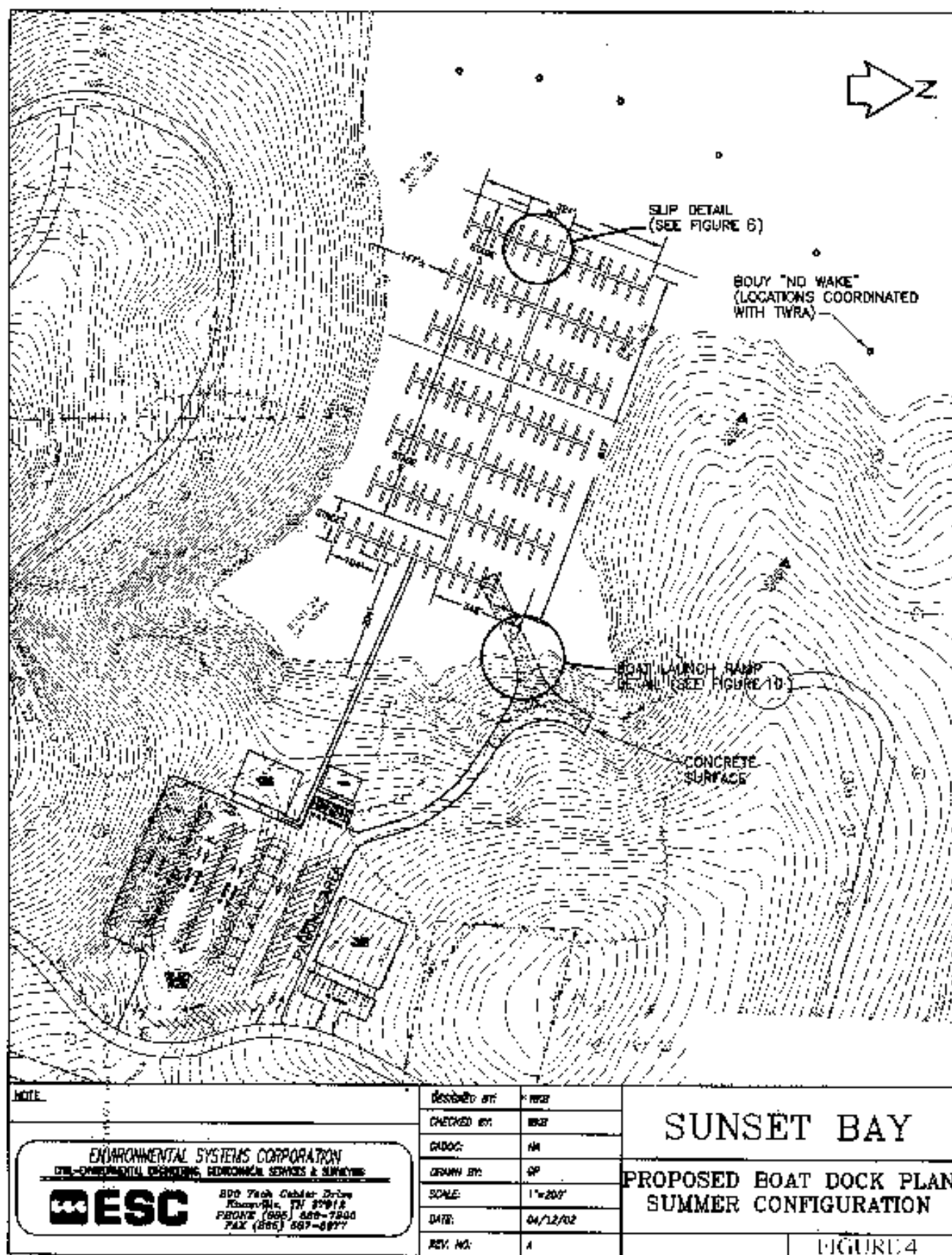


Figure 4. Sunset Bay Proposed Boat Dock Plan - Summer Configuration

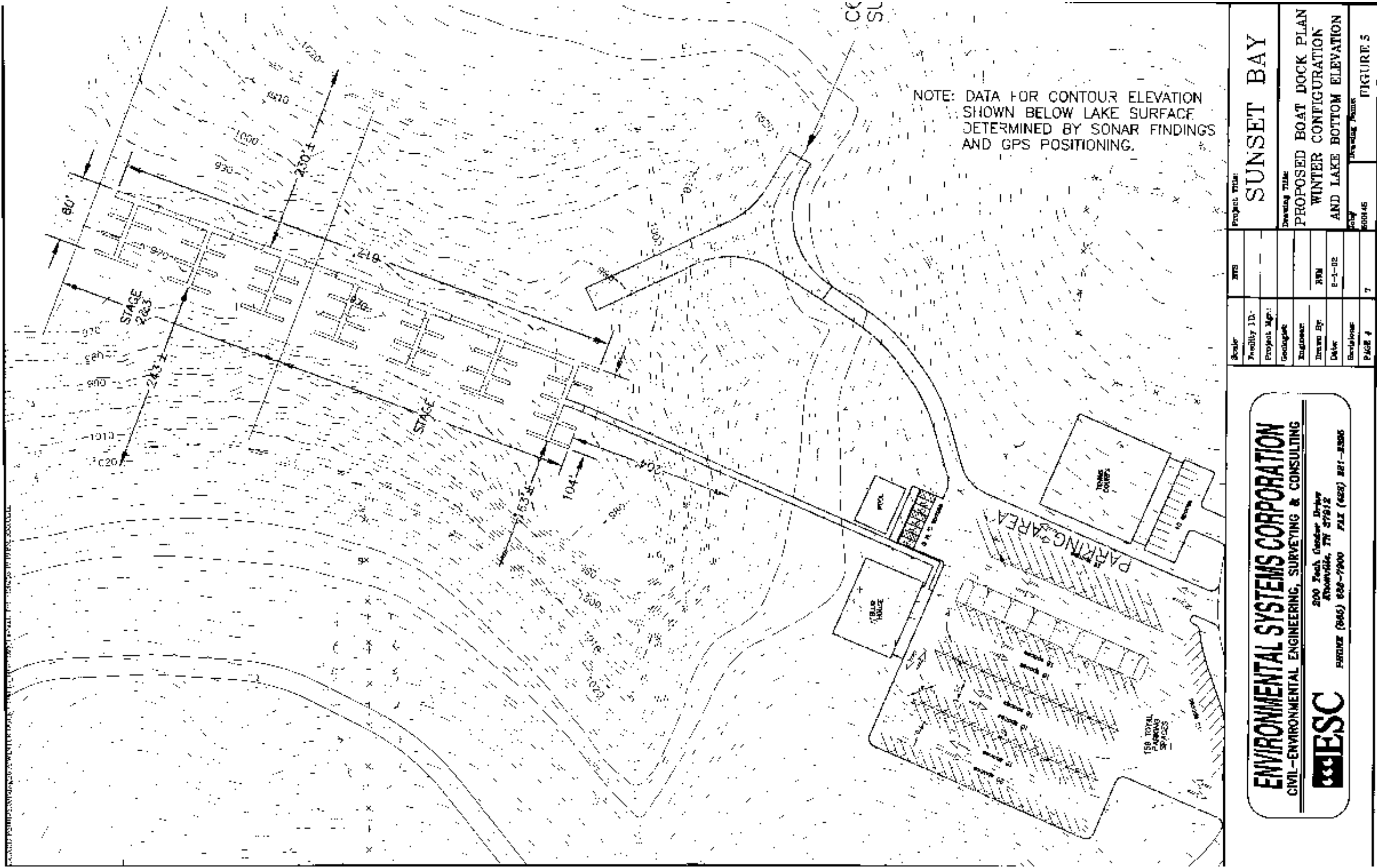
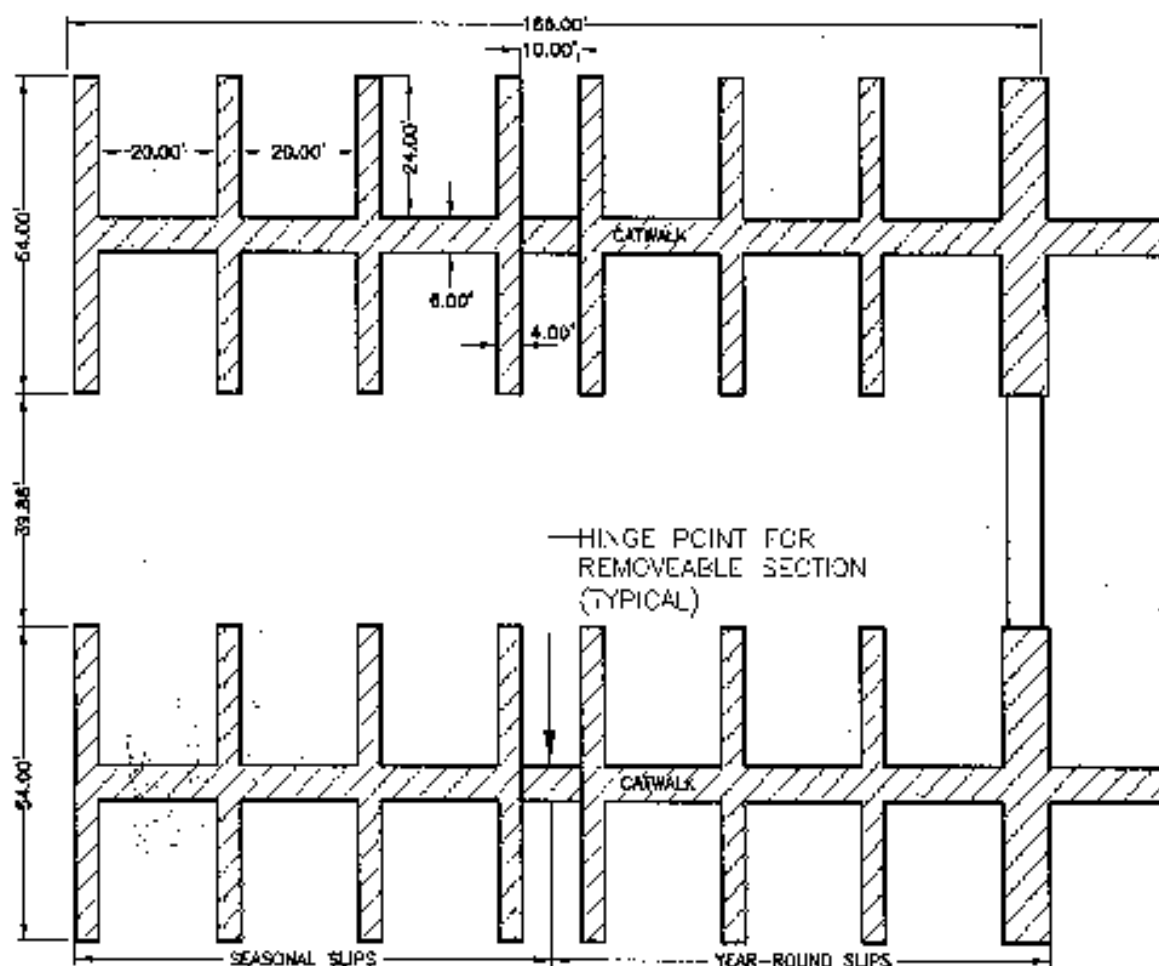


Figure 5. Sunset Bay Proposed Boat Dock Plan - Winter Configuration and Lake Bottom Elevation



TYPICAL DOCK DETAIL

1. The docks will be constructed of aluminum tubing with textured painted flooring with high density polyethylene tie-down devices.

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DESIGNED BY:	MOB
CHECKED BY:	WKS
CAD/C:	AM
DRAWN BY:	GP
SCALE:	1"=30'
DATE:	04/12/02
REV. NO:	0

SUNSET BAY

**PROPOSED COMMUNITY
DOCK FACILITY DETAIL**

FIGURE 6

Figure 6. Sunset Bay Proposed Community Dock Facility Detail

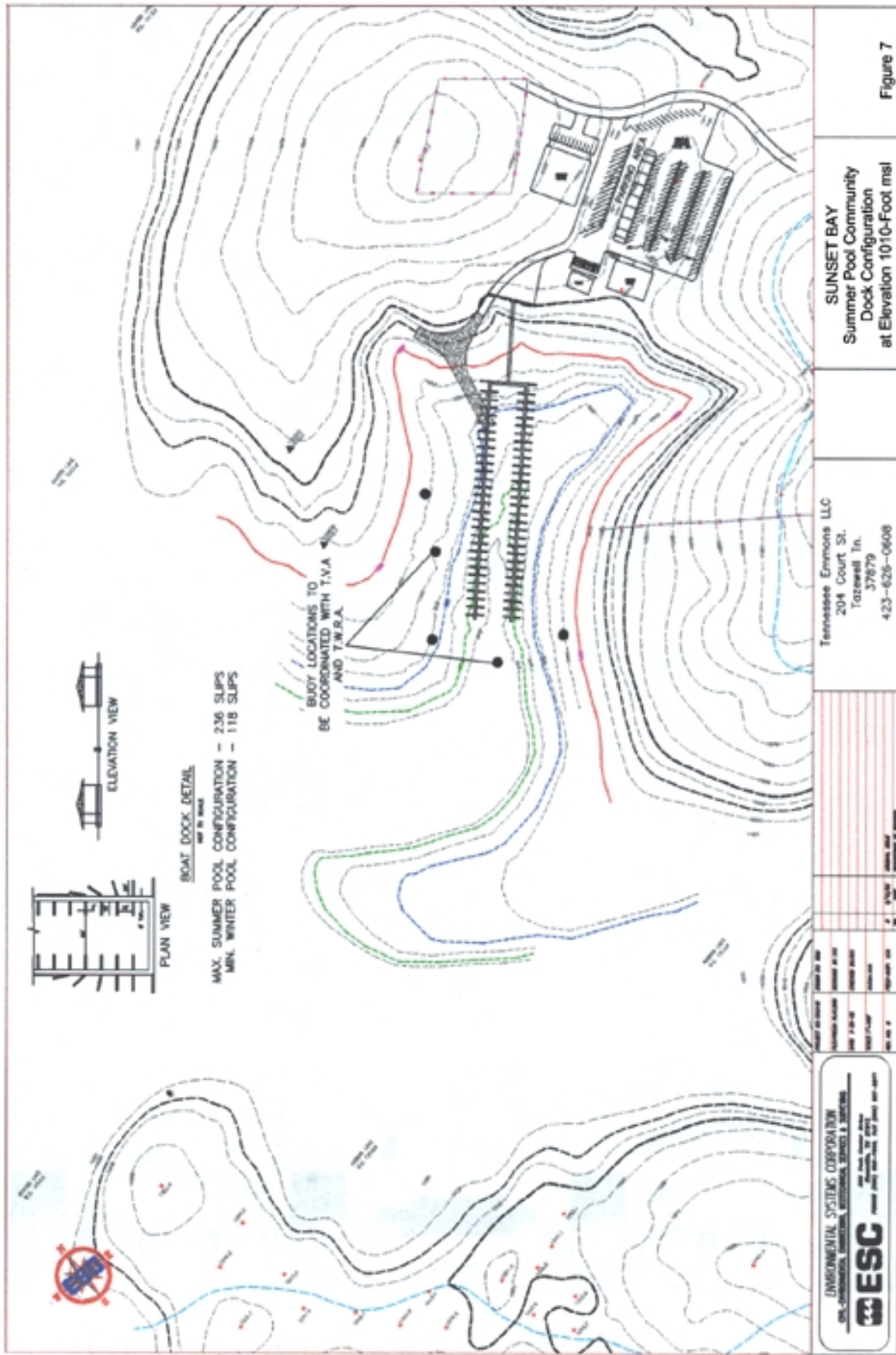


Figure 7. Sunset Bay Summer Pool Community Dock Configuration at Elevation 1010-Foot msl

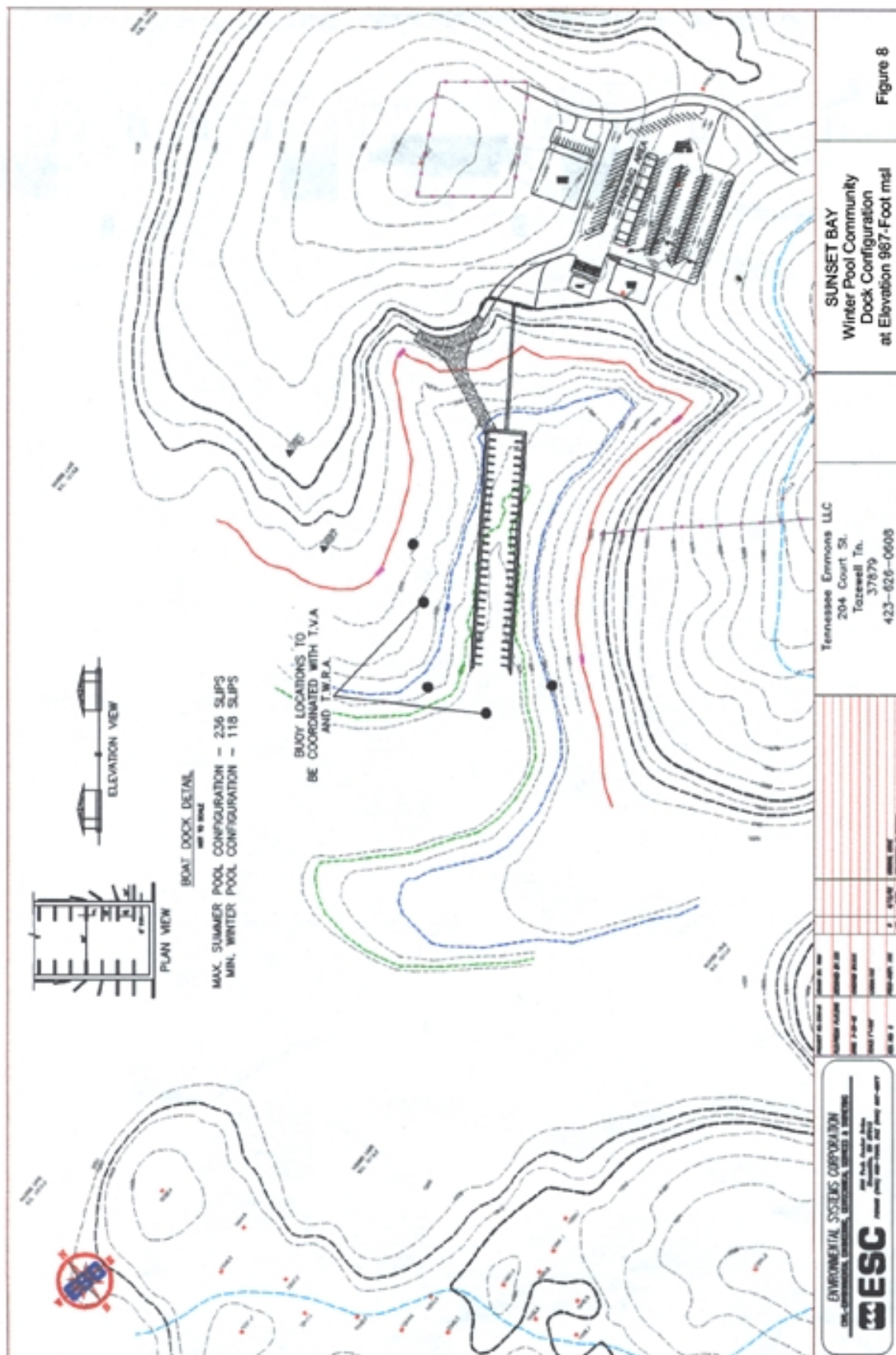


Figure 8. Sunset Bay Winter Pool Community Dock Configuration at Elevation 987-Foot msl

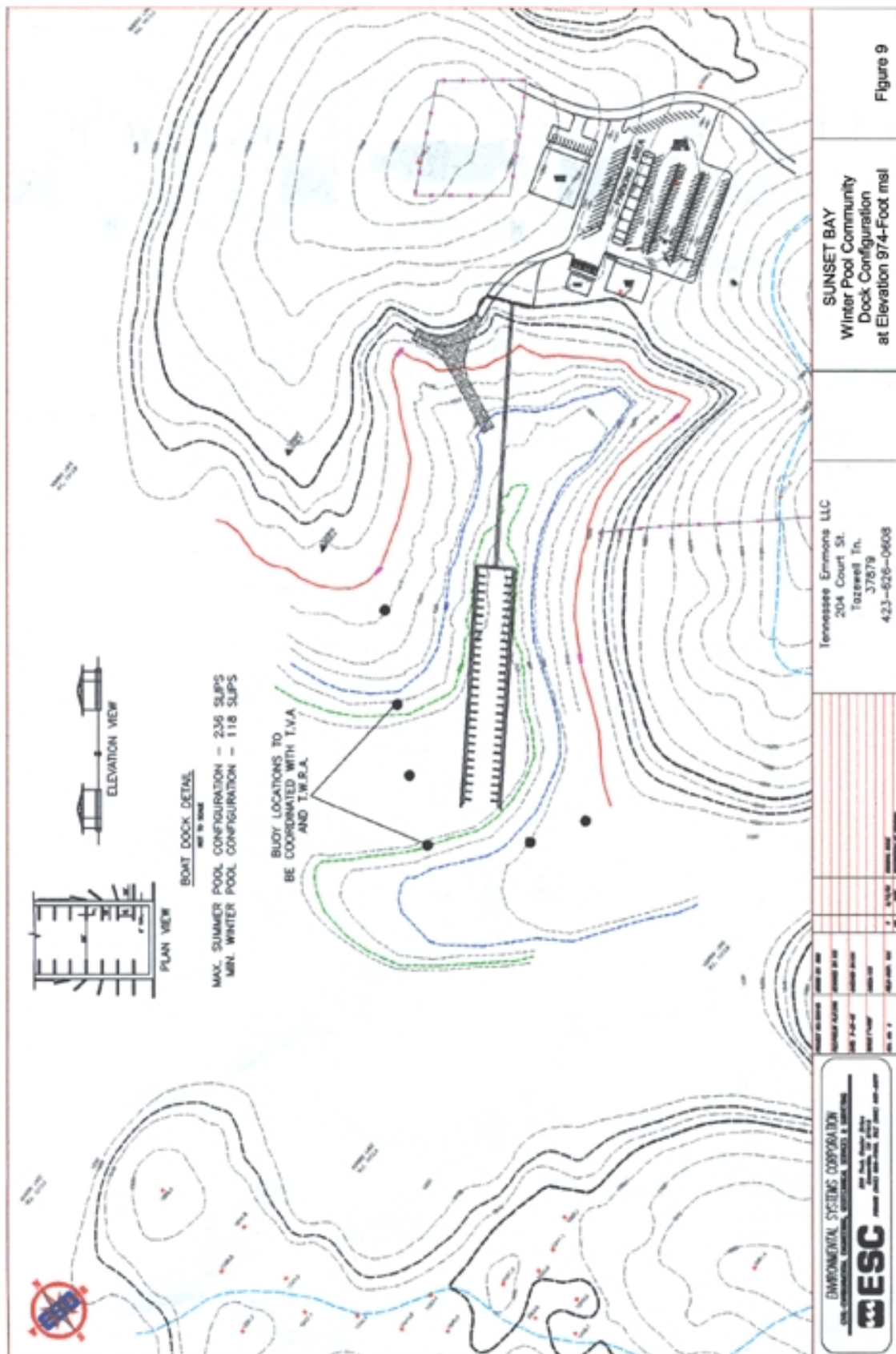


Figure 9. Sunset Bay Winter Pool Community Dock Configuration at Elevation 974-Foot msl

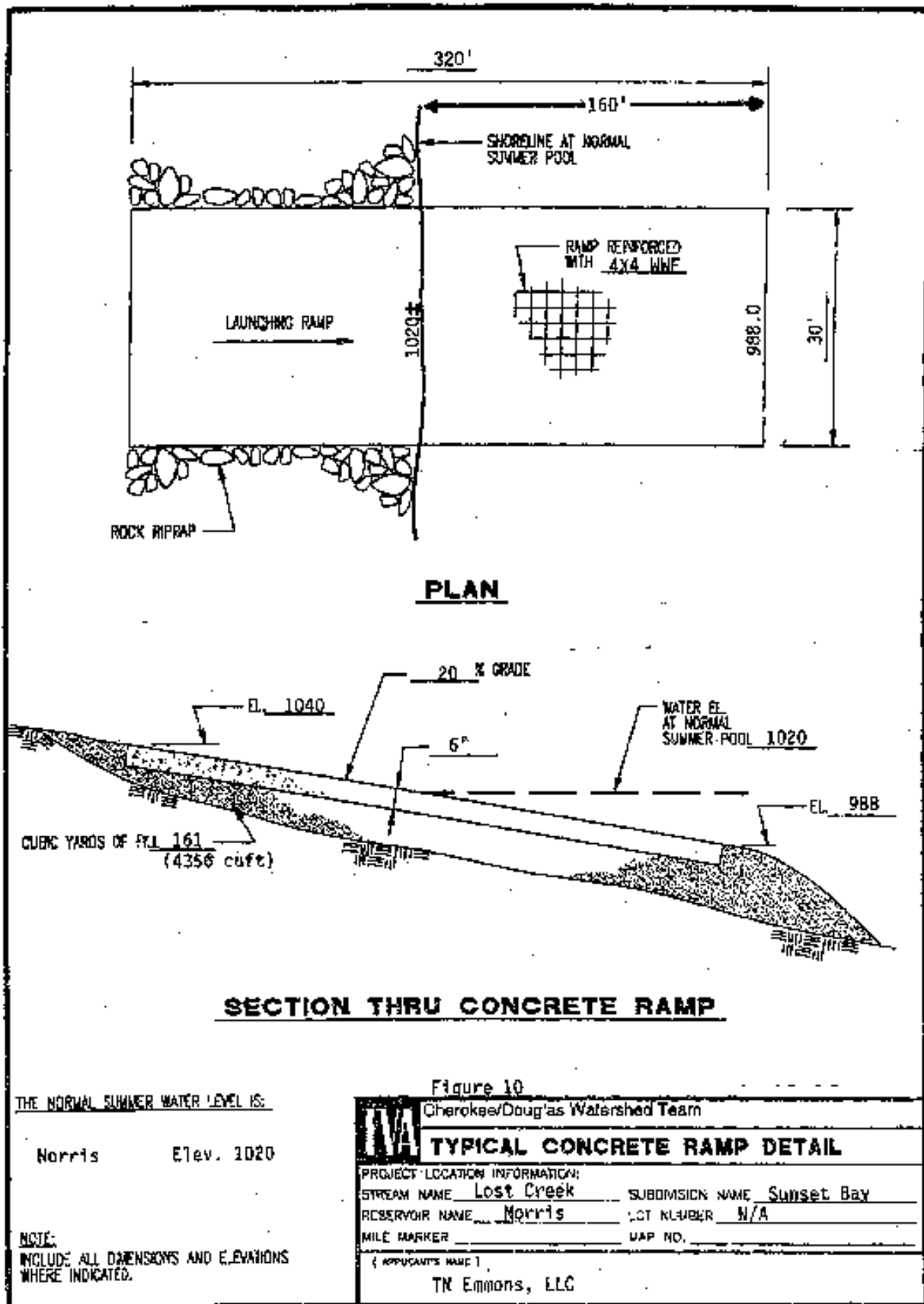


Figure 10. Sunset Bay Typical Concrete Ramp Detail

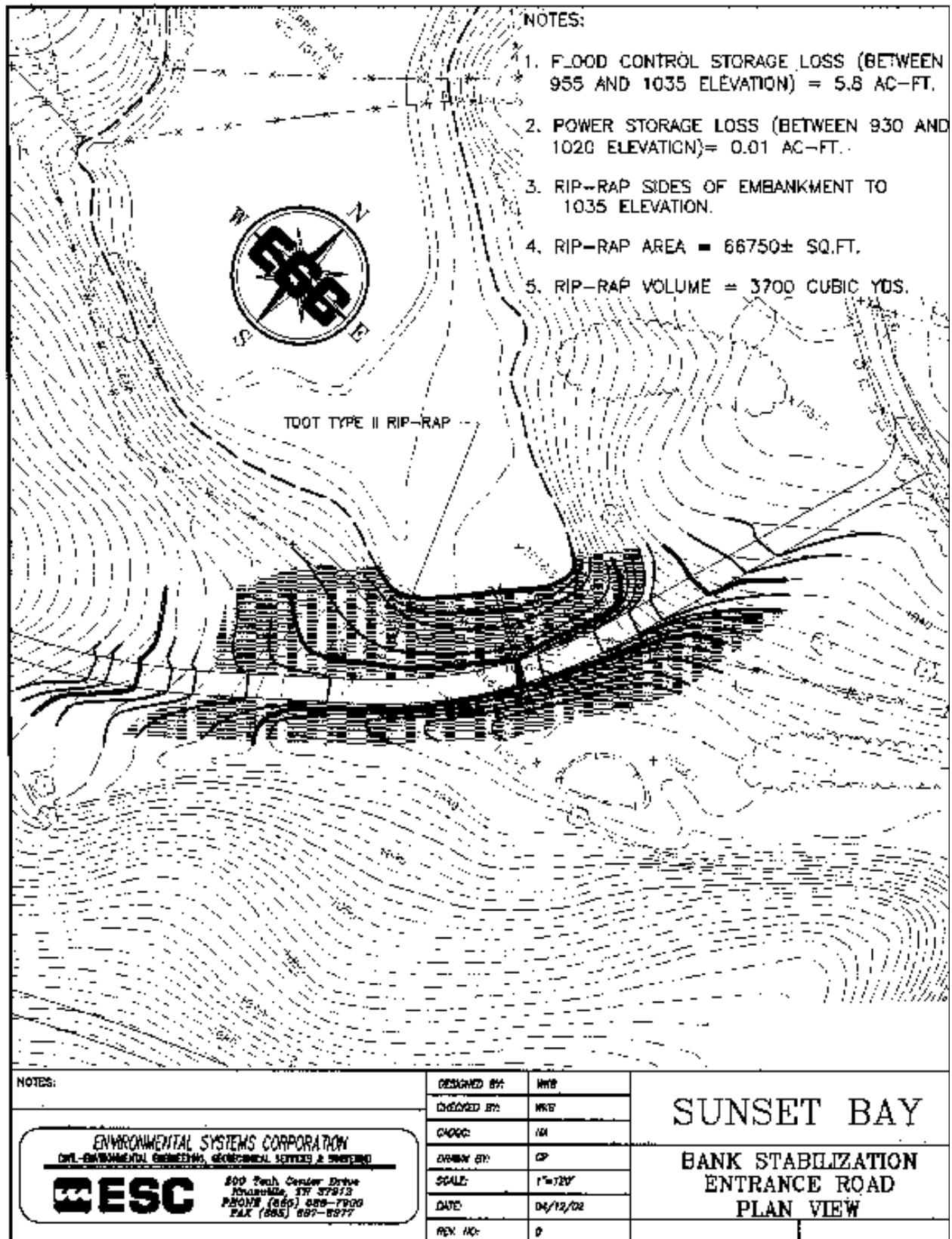


Figure 11. Sunset Bay Bank Stabilization Entrance Road Plan View